

### **REMARKS**

Claims 1, 3-25, 27-31, 67 and 68 are currently pending in the subject application and are presently under consideration. Claims 1 and 25 have been amended as shown on pp. 2-6 of the Reply. Claims 5, 28, 32-64 and 66-70 have been canceled.

Applicants' representative thanks the Examiner for the courtesies extended during the teleconference of August 28, 2007.

Since the amended limitations merely emphasize subject matter as originally claimed, these limitations should already have been considered during an initial search in connection with the subject application. Pursuant to MPEP §714.13, applicants' representative submits that the amendments to these claims "only requires a cursory review by the Examiner" and thus, entry and consideration thereof is respectfully requested.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

#### **I. Rejection of Claim 68 Under 35 U.S.C. §112, sixth paragraph**

Claim 68 stands rejected under 35 U.S.C. §112, sixth paragraph because the claim does not pass the 3-prong analysis for "means for" claim limitations. Claim 68 has been canceled, as such the rejection is moot and should be withdrawn.

#### **II. Rejection of Claims 1, 67 and 68 Under 35 U.S.C. §112, second paragraph**

Claims 1, 67 and 68 stand rejected under 35 U.S.C. §112, second paragraph as failing to define the subject matter which the applicant regards as his invention. Claim 1 has been amended to correct any deficiencies related to this rejection. Claims 67 and 68 have been canceled, as such the rejection is moot and should be withdrawn.

#### **III. Rejection of Claims 1-24, 65, 67 and 68 Under 35 U.S.C. §101**

Claims 1-24, 65, 67 and 68 stand rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. Independent claim 1 has been amended herein to clearly illustrate that elements within such claims are components associated with a computer processor. In particular, claim 1 as amended is directed towards a system that facilitates identifying human interaction, comprising *a computer processor executing software*

*components, the software components recorded on a computer-readable medium and being executed by the computer processor...* (Support for these amendments can be found on pg. 7, lines 23-30). Claims 67 and 68 have been canceled. Accordingly, this rejection should be withdrawn with regard to claims 1-24, 65, 67 and 68.

#### IV. Rejection of Claims 1-5 Under 35 U.S.C. §102(e)

Claims 1-5 stand rejected under 35 U.S.C. §102(e) as being anticipated by Pinkas *et al.* (US 2004/0073813). It is respectfully requested that this rejection should be withdrawn for at least the following reasons. Pinkas *et al.* does not teach or suggest each and every element as set forth in the subject claims.

A single prior art reference anticipates a patent claim only if it expressly or inherently describes each and every limitation set forth in the patent claim. *Trintec Industries, Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 63 USPQ2d 1597 (Fed. Cir. 2002); *See Verdegaaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the ... claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The claimed subject matter relates to a system and/or methodology for generating order-based human interactive proofs (HIPs) as well as systems and methods that facilitate rating their difficulty automatically. In general, HIPs are puzzles that ask users to solve a problem to prove that they are a human being and are effectively employed to control access to any type of useful program, tool, device, system or set-up system (e.g., email, email account set-up, websites).

In particular, independent claim 1 recites a system that facilitates identifying human interaction, comprising: *an access control component that controls access to one of a computer-based action and computer-based application; and an identification component that facilitates determining that access is initiated by a human, the identification component presenting an order-based problem to be solved before access is allowed, the order-based problem being an order-based human interactive proof (HIP) and comprising an arrangement of a plurality of objects whereby a user is asked to correctly identify at least a subset of the objects as well as to identify them in a particular order, the order being based at least in part upon a set of instructions provided to the user, wherein at least a first subset of the objects being at least*

*partially obscured by a second subset of objects, and the identification component communicating with an order-based problem database to retrieve order-based problems as needed.* Pinkas *et al.* does not expressly or inherently disclose the aforementioned novel aspects of applicants' claimed subject matter as recited in the subject claims.

Pinkas *et al.* discloses a method for establishing a secure channel between a user and a computer application. The method is performed by rendering to the user a randomly selected identifier; receiving input from the user based on both the randomly selected identifier and a secret identifier associated with the user; determining, based on the input whether the user demonstrates knowledge of the secret identifier; and authenticating or not authenticating the user based upon the outcome of said determining step. (See pg. 1, paragraph [0011]).

In contrast, applicants' claimed subject matter discloses a system that facilitates identifying human interaction. The system includes an identification component that facilitates determining that access has been initiated or requested by a human – rather than automatically by a computer. This is accomplished by presenting an order-based problem, such as a human interactive proof (HIP), to be solved. A correct response must be received by the identification component in order for access to be granted to the user by the access controller component.

Order-based HIPs, unlike sequence-based HIPs, require different techniques to be solved. In some instances, some minimum amount of knowledge about one or more objects or images included in the HIP can be necessary or required for solving it. In addition to identifying individual elements and only the relevant elements (*e.g.*, not all are necessarily included in the correct answer), providing a correct order of the relevant elements is also important for solving the HIP. Additionally, the difficulty level of the HIP can be further modified by at least partially obscuring the connections. In one instance, the connections can be partially obscured by translucent shapes in which relatively large portions of the arrows are obscured. In another instance, smaller portions of the connections can be obscured by opaque or shaded shapes. Color and/or grayscale shading can also be employed in order to modify and/or adjust the difficulty of the order-based HIP. (See pg. 9, line 13-pg. 10, line 27).

Pinkas *et al.* merely discloses establishing a secure channel between a human user and an application running on a computer system, *via* generating a unique identifier (PIN) associated with a user. (See pg. 2, paragraph [0021]). Applicants' claimed system utilizes order-based HIPs from a database to determine that access has been initiated by a human. Order-based HIPs,

unlike sequence-based HIPs or PINs, require different techniques to be solved, such as not only identifying individual elements, but also providing the correct order of the relevant elements. This is opposed to Pinkas *et al.*, in which a PIN is generated and a selected identifier, and the user identifies the difference between the identifier and the PIN. The secure application then compares the result and if the result reflects the fact that the user knows the PIN, the user is authenticated.

Pinkas *et al.* does not utilize an order-based HIP which includes a first subset of objects that are partially obscured by a second subset of objects. Accordingly, Pinkas *et al.* does not expressly or inherently disclose a system that provides .... *an identification component that facilitates determining that access is initiated by a human, the identification component presenting an order-based problem to be solved before access is allowed, the order-based problem being an order-based human interactive proof (HIP) and comprising an arrangement of a plurality of objects whereby a user is asked to correctly identify at least a subset of the objects as well as to identify them in a particular order, the order being based at least in part upon a set of instructions provided to the user, wherein at least a first subset of the objects being at least partially obscured by a second subset of objects,....*

In view of at least the above, it is readily apparent that Pinkas *et al.* fails to expressly or inherently disclose applicants' claimed subject matter as recited in independent claim 1 (and claims 2-5 which respectively depend there from). Accordingly, it is respectfully requested that these claims be deemed allowable.

**V. Rejection of Claims 6-31, 65, 67 and 68 Under 35 U.S.C. §103(a)**

Claims 6-31, 65, 67 and 68 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Pinkas *et al.* in view of Mizrah (US 2004/0225880). It is respectfully requested that this rejection should be withdrawn for at least the following reasons. Pinkas *et al.* and Mizrah, individually or in combination, do not teach or suggest each and every element as set forth in the subject claims.

To reject claims in an application under §103, an examiner must show an un rebutted *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references

themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *See* MPEP §706.02(j). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicants' disclosure. *See In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

As stated *supra*, the claimed subject matter relates to a system and/or methodology for generating order-based human interactive proofs (HIPs) as well as systems and methods that facilitate rating their difficulty automatically. In particular, independent claim 25 recites a method that facilitates identifying human interaction comprising: ***presenting an order-based HIP to a user desiring access to at least one of a HIP-controlled computer-based action and a HIP-controlled computer-based application, the order-based HIP being retrieved from a HIP database; requesting the user to solve the order-based HIP to gain the access, solving the order-based HIP, comprising: viewing an image comprising a plurality of objects; identifying at least a subset of the objects, the subset of objects determined at least in part upon a set of given instructions, wherein at least a first subset of the objects being at least partially obscured by a second subset of objects; and ordering the at least a subset of the objects, the ordering determined at least in part upon the set of given instructions; and determining whether access should be given based at least in part on the user's response to the HIP.*** The cited art, individually or in combination, fails to teach or suggest such aspects of the claimed subject matter.

Pinkas *et al.* discloses a method for establishing a secure channel between a user and a computer application. The method is performed by rendering to the user a randomly selected identifier; receiving input from the user based on both the randomly selected identifier and a secret identifier associated with the user; determining, based on the input whether the user demonstrates knowledge of the secret identifier; and authenticating or not authenticating the user based upon the outcome of said determining step. (*See* pg. 1, paragraph [0011]).

In contrast, applicants' claimed subject matter discloses a system that facilitates identifying human interaction. The system utilizes order-based HIPs to identify whether the user is human. Order-based HIPs, unlike sequence-based HIPs, require different techniques to be

solved. In some instances, some minimum amount of knowledge about one or more objects or images included in the HIP can be necessary or required for solving it. In addition to identifying individual elements and only the relevant elements (*e.g.*, not all are necessarily included in the correct answer), providing a correct order of the relevant elements is also important for solving the HIP. Additionally, the difficulty level of the HIP can be further modified by at least partially obscuring the connections. In one instance, the connections can be partially obscured by translucent shapes in which relatively large portions of the arrows are obscured. In another instance, smaller portions of the connections can be obscured by opaque or shaded shapes. Color and/or grayscale shading can also be employed in order to modify and/or adjust the difficulty of the order-based HIP. (*See* pg. 9, line 13-pg. 10, line 27).

Pinkas *et al.* merely discloses establishing a secure channel between a human user and an application running on a computer system, *via* generating a unique identifier (PIN) associated with a user. (*See* pg. 2, paragraph [0021]). Pinkas *et al.* does not utilize an order-based HIP which includes a first subset of objects that are partially obscured by a second subset of objects. Accordingly, Pinkas *et al.* does not expressly or inherently disclose a method that provides ***presenting an order-based HIP to a user desiring access to at least one of a HIP-controlled computer-based action and a HIP-controlled computer-based application, the order-based HIP being retrieved from a HIP database; requesting the user to solve the order-based HIP to gain the access, solving the order-based HIP, comprising: viewing an image comprising a plurality of objects; identifying at least a subset of the objects, the subset of objects determined at least in part upon a set of given instructions, wherein at least a first subset of the objects being at least partially obscured by a second subset of objects; and ordering the at least a subset of the objects, the ordering determined at least in part upon the set of given instructions; and determining whether access should be given based at least in part on the user's response to the HIP.***

Mizrah does not cure the deficiencies of Pinkas *et al.* with respect to independent claim 25, Mizrah discloses an interactive method for authentication of a client in a network environment which utilizes first and second “what user knows” authentication factors. The first and second “what user knows” authentication factors are algorithmically and parametrically independent. (*See* pg. 3, paragraph [0065]).

In contrast, applicants' claimed subject matter utilizes order-based HIPs from a database to determine that access has been initiated by a human, wherein a first subset of objects are partially obscured by a second subset of objects to increase difficulty. Accordingly, Mizrah also does not expressly or inherently disclose a method that provides ***presenting an order-based HIP to a user desiring access to at least one of a HIP-controlled computer-based action and a HIP-controlled computer-based application, the order-based HIP being retrieved from a HIP database; requesting the user to solve the order-based HIP to gain the access, solving the order-based HIP, comprising: viewing an image comprising a plurality of objects; identifying at least a subset of the objects, the subset of objects determined at least in part upon a set of given instructions, wherein at least a first subset of the objects being at least partially obscured by a second subset of objects; and ordering the at least a subset of the objects, the ordering determined at least in part upon the set of given instructions; and determining whether access should be given based at least in part on the user's response to the HIP.***

In view of the aforementioned deficiencies of the cited art, it is respectfully submitted that this rejection be withdrawn with respect to independent claims 1, 25, 65, 67 and 68 (and claims 6-24 and 26-31 which respectively depend there from).

**CONCLUSION**

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP440US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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